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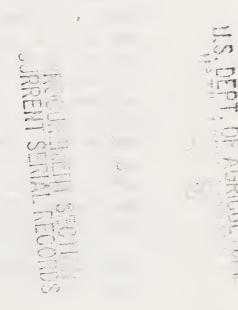
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A 75 U 44 cipy 2 MICRO-ORGANISM CULTURE COLLECTIONS: **ACRONYMS AND ABBREVIATIONS**

ARS-NC-17

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Preface

This study and compilation was made as part of the investigations being conducted at the Northern Regional Research Laboratory, Agricultural Research Service, Peoria, III., on industrial utilization of cereal grains and oilseed crops. The ARS Culture Collection (with acronym NRRL) maintained here is one of the world's largest and most complete collections of agriculturally and industrially important bacteria, yeasts, molds, and actinomycetes. This collection serves as a source of authentic micro-organisms for the fermentative production of organic acids, vitamins, antibiotics, enzymes, feeds, beverages, and foods. Also, it serves as a repository for strains concerned with patent applications and as a source of micro-organisms of value in studies on the pollution control and health aspects of the Department's research in these areas.

I am indebted to Dr. W. C. Haynes, bacteriologist, ARS Culture Collection Research, NRRL, for supplying about 100 of the acronyms listed herein.

MICRO-ORGANISM CULTURE COLLECTIONS: ACRONYMS AND ABBREVIATIONS

By T. G. Pridham, ARS Culture Collection, Northern Regional Research Laboratory, Agricultural Research Service, U.S. Department of Agriculture, Peoria, III.

A most important aspect of the operation of a collection of micro-organisms involves recording histories of many strains, chronicling. In chronicling, the designation of strains of micro-organisms by an acronym and number has become necessary for an orderly arrangement of thousands of strains currently under study in many laboratories, and also it provides an accurate reference for future students who will collate the results of research conducted with these materials. Many of the strains now under study will be adequately preserved for some time. Accurate, original designation and identity of that designation with progeny, descendants, or subcultures of particular strains is critical.

Unfortunately, some of the early researchers either recognized no need for strain designations, or they believed it unnecessary. Some modern-day microbiologists still follow this pattern. It is difficult to comprehend many reports on micro-organisms because of omissions in strain designations, omissions of characterizations of the strains under study, and lack of adequate provisions for preserving strains.

Lack of provision for adequate preservation, of course, was no real fault of the early workers because some of the knowledge in this area had not yet been obtained, as lyophilization or liquid nitrogen preservation. Publications on *Streptomyces albus* (Rossi Doria), Waksman and Henrici, 1943, are adequate examples where neglect of assigning acronyms and strain numbers and inability to preserve strains has led to much confusion. There are numerous contributions on one or more functions of *S. albus* where no acronym, no strain number, or any kind of formal characterization is given and no strains were preserved. With the knowledge that the name appears to have been applied to at least two different kinds of streptomycetes (Pridham and Lyons¹, Lyons and Pridham²), the uncertainties are evident that arise in attempting to collate and to generalize about functions or characteristics of this species.

Hundreds of different collections of micro-organisms are known throughout the world, each with its own numbering system. Many of these collections

¹PRIDHAM, T. G. AND LYONS, A. J. "STREPTOMYCES ALBUS" (ROSSI-DORIA) WAKSMAN ET HENRICI: TAXONOMIC STUDY OF STRAINS LABELED "STREPTOMYCES ALBUS". J. BACT. 81: 431-441. 1961.

²LYONS, A. J. AND PRIDHAM, T. G. PROPOSAL TO DESIGNATE STRAIN ATCC 3004 (IMRU 3004) AS THE NEOTYPE STRAIN OF "STREPTOMYCES ALBUS" (ROSSI-DORIA) WAKSMAN AND HENRICI. J. BACT. 83: 370-380. 1962.

maintain progeny of the same original strains obtained either from the person who first isolated the micro-organism or secondhand through culture collection exchange agreements and purchases. Thus, progeny of the same strain are available under many different designations.

To more precisely identify such progeny, the acronym (abbreviation, sigla) of the collection where they are maintained serves as a prefix for the number. For example, NRRL 2209 is the acronym and strain number of progeny of *Streptomyces aureofaciens* Duggar 1948, strain Lederle A-377 maintained in the ARS Culture Collection of the Northern Regional Research Laboratory. The acronym, NRRL, now is known among culture collection specialists to refer to the ARS Culture Collection. The strain number 2209 indicates that this strain was the 2,209th accessioned into the permanent mold collection.

Although streptomycetes are known to be bacteria, at the time of accessioning, that issue was cloudy, and the decision was made to include U.S. patent deposition strains of streptomycetes in the permanent mold collection. This strain was the first patent deposition strain accessioned in the ARS Culture Collection in connection with a U.S. patent application.

Only an accurate and complete chronicle can reveal the original identity of many strains each of which carries many different designations, the extent depending only upon the number of different collections which have acquired progeny of the micro-organism. For example, the original strain designation of *Stm. aureofaciens* was Lederle A-377. Thus, Lederle A-377 and NRRL 2209 are designations for progeny of the same strain.

As another example, *Streptoverticillium abikoense* (Umezawa et al.) Locci et al. 1969 is a proposed species whose type strain was originally numbered Z-1-6 at the National Institute of Health of Japan (NIHJ). Therefore, the original strain designation was NIHJ Z-1-6. Progeny of this strain now carry the following different acronyms and numbers, among others: ATCC 12766 (American Type Culture Collection), IMRU 3654 (Institute of Microbiology, Rutgers University), NRRL B-2133 (Northern Regional Research Laboratory). Theoretically, cultures designated by these acronyms and numbers all should exhibit the same characteristics, provided they have been maintained properly. Also considered are variations encountered among the various and sundry criteria used for characterization and description.

As indicated before, there now are many culture collections located throughout the world, some quite reliable, others less so. Martin and Skerman³ indicated that some 800 collections had been solicited for information to prepare their "World Directory of Collections of Microorganisms". Unfortunately, they neglected to include the acronyms for the collections they listed. Information may be obtained on acronyms by perusing many different culture collection catalogues; but none provides a complete list. Accordingly, it is the purpose of this bulletin to provide the most complete listing to date.

The list should be of value to culture collection personnel and researchers desiring precise information on strains they are studying or the location of collections where particular strains may be obtained. It was not possible to obtain complete addresses for some collections. Nevertheless, enough information is given to allow pursuit of any leads that may be indicated.

³MARTIN, S. M. AND SKERMAN, V. D. B., EDS. WORLD DIRECTORY OF COLLECTIONS OF CULTURES OF MICROORGANISMS. 560 PP. NEW YORK. 1972.

Because the Russians use either English or Cyrillic letters in either English or Russian language publications, acronyms for the Russian collections are given in both languages. Where possible, the titles of non-U.S. organizations have been translated into English. Thus, the acronyms originally based on the organization titles in the native languages may not seem to be based on the initial letter of each important component of the title.

Some collections have been abandoned for various reasons, yet their acronyms remain in the scientific literature. These also are included in the list. Some collections listed in the World Directory apparently have no known acronyms. In coining an acronym, directors of such collections are advised to study this list carefully to avoid duplication which could lead to confusion. A number of the acronyms listed herein are not included in the publication of Crowley and Thomas⁴, a comprehensive listing of many acronyms and initialisms covering many fields.

Acronym or

Abbreviation Meaning **ABBOTT** Abbott Laboratories, North Chicago, III. 60064 ABJ Association of Brewers of Japan, Tokyo, Japan. ACC Akers Research Laboratories of Imperial Chemical Industries, Ltd., Welwyn, Herts, England. (Formerly BRL or ARL.) Archive of Microbial Strains, National University of ACM Tecuman, S.M. Tecuman, Argentina, S.A. Department of Bacteriology, University of Wiscon-ACR sin, Madison, Wis. 53706 U.S.A. **ACRIC** Agricultural College of Research Institute, Coimbatore, India. **ACST** Advisory Committee on the Application of Science and Technology to Development (ECOSOC). **ACTU** Department of Agricultural Chemistry, Faculty of Agriculture, University of Tokyo, I-I-I Yayoi, Bunkyo-ku, Tokyo, Japan. See FAT and ATU. **AECU** Agricultural Experiment Station, New York College of Agriculture, Cornell University, New York, N.Y. 10001 U.S.A. Abeno Higher Technical School, Osaka, Japan. AHTS AHU Laboratory of Culture Collection of Microorganisms, Faculty of Agriculture, Hokkaido University, Nishi-9-chôme, Kita-9-jo, Sapporo City, Japan. AID Agency for International Development. AIMS AIU Faculty of Agriculture, Iwate University, Osaka, Japan.

⁴CROWLEY, E. T. AND THOMAS, R. C., EDS. ACRONYMS AND INITIALISMS DIRECTORY. ED. 4, 635 PP. GALE RESEARCH CO., DETROIT, MICH., U.S.A. 1973.

Central Research Laboratories, Ajinomoto Com-AJ pany, Inc., Kawasaki, Japan. AKMI Department of Technical Microbiology, August Kirchenstein Institute of Microbiology, Latvian Academy of Sciences, 55-Kleisti, Riga, Latvia. **AKU** Faculty of Agriculture, Kyoto University, Kyoto, Japan. **AMC** Walter Reed Army Medical Center, Washington, D.C. 20013 U.S.A. (Formerly Army Medical Department Research and Graduate school or Army Medical Corp). Agricultural Microbiology Division, Ministry AMD of Agriculture, University Street, Orman, Giza, United Arab Republic. **AMERICAN** American Cyanamid Company, New York, N.Y. CYANAMID 10001 U.S.A. See also "Lederle". AMIF American Meat Institute Foundation, Chicago, III. 60607 U.S.A. AMNH American Museum of Natural History, Central Park West and 79th Street, New York, N.Y. 10024 U.S.A. AMP Australian Mycological Panel. (Formerly Aust. or SN.) AMS Army Medical School, Japan. ANU Faculty of Agriculture, Niigata University, Japan. AOU Faculty of Agriculture, Okayama University, Okayama, Japan. Yokohama Animal and Plant Quarantine Station, **APQS** M.A.F., Japan. Antibiotics Research Center, Hindustan Anti-ARCH biotics, Ltd., Pimpri, Poona District, India. See HACC. Antibiotics Research Institute, Moscow, U.S.S.R. ARI Also USSR ARI. (АРИ) ARIN Nippon Agricultural Research Institute, Tokyo, Japan. Also RAJ. Agricultural Research Service, U.S. Department of ARS Agriculture, Washington, D.C. 20250 U.S.A. See ACC. ARL Department of Agricultural Botany, Faculty of ASCA Agriculture, Ain Shams University, Shoubra El Khaima, United Arab Republic. American Type Culture Collection, 12301 Parklawn ATCC Drive Rockville, Md. 20852 U.S.A. Formerly located at 2112 M Street, N.W., Washington, D.C. U.S.A. Faculty of Agriculture or Department of Agricul-**ATU** tural Chemistry, Tokyo University, 1 Chome

Mukogaoka, Yayoi-cho, Bunkyo-ku, Tokyo,

Japan. See FAT and ACTU.

AY

Culture Collection, Averst Research Laboratories, 1025 Laurentian Blvd., Saint-Laurent, Quebec, Canada.

Baarn/Delft

See CBS.

Basel

W. Vischer Collection, Botanical Institute, University of Basel, Basel, Switzerland.

BATU

Department of Forestry, Institute of Botany, Faculty of Agriculture, University of Tokyo, Tokyo, Japan.

BBI

Biological Institute for Soil and Forestry, Kiel-Kitzeburg, Germany.

BBL

Baltimore Biological Laboratory, Division of Bioquest, Division of Becton, Dickinson and Co., Cockeysville, Md. 21030 U.S.A.

BCCM

British Commonwealth Collections of Microorganisms, London, England.

BCIRA

British Cotton, Silk, and Man-made Fibres Research Association, Manchester, England. (Formerly British Cotton Industries Research Association.)

BCMT

Brazilian Collection of Microbial Types, Laboratory of Parasitology, National Faculty of Medicine. University of Brazil, Rio de Janeiro, Brazil, S.A.

BDUN

Botany Department, University of Nottingham, Nottingham, England.

BEECHAM

Beecham Research Laboratories, Brockham Park, Betchworth, Surrey, England.

BFQM

Bacterioteca, Faculty of Chemistry, Montevideo, Uruquay, S.A.

BIB

Botanical Institute, Berne, Switzerland.

BIG

Botanical Institute, Ernst-Moritz-Arndt-University, Grimmerstrasze 88, Greifswald, East Germany. Also BIU and BIU BIG.

BIHM BIL

Botanical Institute, Hanover Münden, Germany. Botanical Institute, Karl Marx University, Talstrasse 33, 701, East Germany.

BIN (БИН) V.L. Komarova Botanical Institute, Leningrad, U.S.S.R.

BIOVETA

An agency producing veterinary biologicals, Czechoslovakia.

BIRA

British Leather Research Association, Egham, Surrey, England.

BIU **BIU BIG** BKM

See BIG. See BIG.

(BKM)

Department of Type Cultures, Institute of Microbiology, Academy of Sciences, Moscow, U.S.S.R. or All-Union Collection of Microorganisms, Moscow, U.S.S.R. Also BKMF.

BKMF (БКМФ) See BKM.

BI Culture Collection of Algae, Indiana University, Bloomington, Ind. 47401 U.S.A. Baljvaxtlaboratoriet Lantbruksholan, Uppsala, BLUS Sweden. **BNFS** B.N.F. Scheme, Poona-5, India. **BOOTS** Culture Collection, Antibiotics and Fermentation Division, Boots Pure Drug Company, Ltd., Daleside Road, Nottingham, England. See also BPD and CUB. **BPD** Research Department, Boots Pure Drug Company, Ltd., Oakfields Road West, Bridgford, Nottingham, England. See BOOTS and CUB. BPI Type Culture Collection, Burma Pharmaceutical Industry, Industrial Development Corporation, Ministry of Industry, BPI Road, Gyogon, Rangoon, Burma. Beneficencia Portugesa, San Pablo, Brazil, S.A. **BPSP** Bristol Laboratories, P.O. Box 657, Syracuse, N.Y. BRISTOL 13201 U.S.A. BRL See ACC. (Formerly Butterwick Research Laboratories, Imperial Chemical Industries, Ltd., Welwyn, Herts, England.) BS Botanical Institute, Academy of Sciences, Moscow, U.S.S.R. (**Б**C) Institute of Microbiology, University of Brno, Brno, BS Czechoslovakia. Institute of Microbiology, Masaryk University, Brno, Czechoslovakia. Department of Microbiology, Faculty of Natural Sciences, J.E. Purkyne University, Brno, Czechoslovakia. Institute of Bacteriology of Chile, Santiago, Chile, **BSCH** BSCU Botany School, Cambridge University, Cambridge, England. BSM BSM Culture Collection, Botany Department, University of Allahabad, Allahabad, India. Department of Biology, Faculty of Science, Osaka **BSOU** University, Osaka, Japan. **BSRI** Brewing Science Research Institute, Tokyo, Japan. May also be same as GIB or RIB. **BU or BÚ** Biologický Ustav Ceskoslovenská Akademie Ved.,

Na cvičisti, Prague 6, Czechoslovakia. Also

BÚČSAV or BÚČSAV (BU) or BÚ BÚCSAV.

BÚCSAV
See BU.

BÚCSAV
See BU.

See BU.

Berkeley Yeasts Laboratory, Berkeley, Calif. **BYIC** 94701 U.S.A. CAES Chiba Prefecture Agricultural Experiment Station, Chiba, Japan. Culture Collection of Algae and Protozoa, Botany Cambr. School, University of Cambridge, Cambridge, England. See CU. CANAD-201 Division of Bacteriology and Dairy Research Science Service, Department of Agriculture, Ottawa, Canada. Division of Bioscience, National Research Council, CANAD-212 Ottawa, Canada. Collection of Animal Pathogenic Microorganisms, CAPM Research Institute of Veterinary Medicine, Brno-Medlánky, Czechoslovakia. Case Laboratories, Chicago, III. 60601 U.S.A. CASE CB Collection of Basidiomycetes, Institute of Microbiology, Czechoslovak Academy of Sciences, Prague-Krč, Budějovická, Czechoslovakia. **CBLB** Collection of Bacteriophages and Lysogenic Bacteria, Institute of Biophysics, Czechoslovak Academy of Sciences, Královopolská 135, Brno. Czechoslovakia. **CBRS** Coffee Board Research Station, Mysore, India. **CBS** Centraalbureau voor Schimmelcultures, Oosterstraat 1, Baarn, Netherlands. Also Baarn/Delft. Carolina Biological Supply Company, Elon College, **CBSC** N.C. 27244 U.S.A. CSIRO Division of Plant Industry, Canberra City, CC A.C.T., Australia. Culture Collection of Entomogenous Bacteria, De-**CCEB** partment of Insect Pathology, Institute of Entomology, Institute of Biology, Czechoslovak Academy of Sciences, Na cvičišti 2, Prague 6, Czechoslovakia. Culture Collection of Fungi, Department of Botany, CCF Faculty of Sciences, Charles University, Benátská 2, Prague 2, Czechoslovakia. CCH National Sanatorium, Chubu Central Hospital, Obu, Japan. CCM Czechoslovak Collection of Microorganisms, J.E. Purkyně University, třidd Obróneů Míru 10, Brno, Czechoslovakia. or Collection of Microbial Cultures, Faculty of Pharmacy and Biochemistry, Junin 954-IV piso, Buenos Aires, Argentina, S.A. Culture Collection, Microbiology Department, **CCMDB** Faculty of Science, J.E. Purkyne University,

třidd Obróneu Miru 10, Brno, Czechoslovakia.

CCMTC Center of Collection of Microbial Types of Czechoslovakia, Department of Parasitology, Charles IV University, Prague, Czechoslovakia. **CCPY** Laboratory for Mycological Research, Faculty of Medicine, Comenius University, Mickiewiczova 13, Bratislava, Czechoslovakia. CCRUAR Department of Soil Science, Agricultural College, Alexandria University, Chatby, Alexandria, United Arab Republic. Committee of Chinese Type Culture Collections, CCTCC Shanghai, China. Centre de Collections de Types Microbiens, 19 **CCTM** Avenue César-Roux, Lausanne, Switzerland. Culture Collection, Utrecht Pays-Bas, Nether-CCUPB lands. CCY Institute of Chemistry of the Czechoslovak Academy of Sciences, Dúbravská cesta, Bratislava, Czechoslovakia. Also CHISAV. Canadian Department of Agriculture, Ottawa, CDA Ontario, Canada. Center for Disease Control or Communicable Dis-CDC ease Center, United States Public Health Service, Atlanta, Ga. 30333 U.S.A. Also NCDC or CDC-RH. See RH. See CDC. CDC-RH CEB Centre d'Etudes du Bouchet, Le Bouchet, France. CECT Spanish Collection of Type Cultures, Department of Microbiology, Faculty of Science, Salamanca, Spain. Also CSIC. Center of Enterobacteria, Agronomic and Veteri-**CEFAV** nary Faculty, University of Buenos Aires, Buenos Aires, Argentina, S.A. Central Experimental Farm, Ottawa, Ontario, **CEFC** Experimental Farm of Mandioca, Azvedo, Brazil, CEMA Center for Forest Mycology Research, Forest Pro-**CFMR** Street, Madison, Wis. 53705 U.S.A.

ducts Laboratory, P.O. Box 5130, North Walnut

See CCY. CHISAV

H.R. Christen Collection, Winterthur, Switzerland. Christen Carnegie Institute, Cold Spring Harbor, Long CI Island, N.Y. 11101 U.S.A. Also CIW.

All-Union Scientific Research Institute of Agricul-CIAM(L) tural Microbiology, Gerzen Stree, 42, Leningrad, U.S.S.R.

> Centrul Experimental de Ingrozaminte Bacteriene, Bucharest, Roumania.

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CIB

CIMI Center of Industrial Microbiological Investigations,

National Institute of Industrial Technology,

Buenos Aires, Argentina, S.A.

CIOMS Council for International Organizations of Medical

Sciences.

CIOS International Council for Scientific Organization.

CIP Collection of Microorganisms of the Pasteur In-

stitute, Paris, France.

CIS Chiba Serum Institute, Chiba, Japan.

CIUS International Council of Scientific Unions.

CIW See CI.

CJDA Technical Research and Development Center of

Japan Defense Agency, Tokyo, Japan.

CL Carlsberg Laboratory, Copenhagen, Denmark.

CLMR Central Laboratory, South Manchuria Railway Company, Ltd., Darien, Manchuria. No longer in

existence.

CLV Central Vaud Dairy, Lausanne, Switzerland.

CMAIRA Collection of Agricultural Microorganisms, Institute of Agricultural Research, Ministry of Agriculture,

Prague, Czechoslovakia.

CMBA Mycology Center, Faculty of Medical Science,

Buenos Aires, Argentina, S.A.

CMI Commonwealth Mycological Institute, Ferry Lane,

Kew, Surrey, England. (Formerly Imperial Bureau of Mycology, Imperial Mycological In-

stitute.) See IMI.

CMIIM Collection of Industrial Microorganisms, Institute

of Mycology, Prague, Czechoslovakia.

CMRI Colonial Microbiological Research Institute, Port-

of-Spain, Trinidad, B.W.I. See Hankey.

CMT Center of Soil Mycology, Torino, Italy.

CN Burroughs Welcome Research Laboratories,

Beckenham, Kent, England.

CODATA Committee on Data for Science and Technology.

COH Research Institute for the Fermentation Industry,

Enzymology and Technical Microbiology,

Germany.

COMAMI Collection of Agricultural, Marine and Industrial

Microorganisms, Institute of Agricultural and Technical Microbiology, E. de Nicola, Sessari,

ilaly.

COMSOL Commercial Solvents Corporation, Terre Haute,

Ind. 47808 U.S.A.

COSTED Committee on Science and Technology in Devel-

oping Countries.

CPBG Commonwealth Bureau of Plant Breeding and

Genetics, School of Agriculture, Cambridge,

England. See also IPBD.

CPHL Central Public Health Laboratory, London, England. Collection of Pathogenic Microorganisms, Institute **CPMIPH** of Public Hygiene, Prague, Czechoslovakia. CRB Former Corps Research Division, now included in Plant and Entomological Sciences, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md. 20705 U.S.A. Central Research Institute of Food Industry. CRIFI CRIPP Department of Microbiology, Research Institute of Cereal and Technical Plants, Buley, Ion-Ionescu dela Brod No. 8, Bucuresti-Boneosa, Roumania. (Now in Czechoslovakia; See next entry). Central Research Institute of Plant Production. Prague-Ruzyně, Czechoslovakia. CS Centralistelle, Netherlands. CSC See COMSOL. CSIC See CECT. CSIR Council for Scientific & Industrial Research. Pretoria, Union of South Africa. Council of Scientific and Industrial Research, Poona, India. CSIRO Commonwealth Scientific and Industrial Research Organization, Division of Food Preservation and Transport, Homebush, N.S.W., Australia. **CSLPA** Commonwealth Serum Laboratory, Parkeville, Victoria. Australia. CTF Technical Center of Farmalobiology, Madrid, CU Culture Collection of Algae and Protozoa, Botany School, Cambridge University, Cambridge, England. See also Cambr. Cornell University, Ithaca, N.Y. 14850 U.S.A. CUB

Cornell University, Ithaca, N.Y. 14850 U.S.A. Actinomycete Culture Collection, School of Applied Biology, University of Bradford, Bradford, Yorkshire, England. Also maintains some cultures previously maintained at Antibiotics and Fermentation Division, Boots Pure Drug Company, Ltd., Nottingham, England.

Central Veterinary Laboratory, Ministry of Agri-

Central Veterinary Laboratory, Ministry of Agriculture, Fisheries and Food, Weybridge, England.

Czechoslovakian Yeast Culture Collection.
Czechoslovak Academy of Agricultural Sciences,
Prague, Czechoslovakia.

CVL

CYCC

CZAA

Former Bureau of Plant Industry, Soil and Agri-DABIS cultural Engineering, now part of Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md. 20705 U.S.A. Department of Agriculture, Canada. DACF National Institute of Biology, Department of Agri-DAIMB culture, Argentina, S.A. Mycological Herbarium or Ottawa Mycology, DAOM Division of Botany and Plant Pathology, Department of Agriculture, Ottawa, Ontario, Canada. Department of Agriculture and Stock, Brisbane, DASA Australia. DB Division of Bacteriology and Dairy Research, Department of Agriculture, Ottawa, Ontario, Canada. Department of Bacteriology, The American Uni-**DBAU** versity, Beirut, Lebanon. Department of Botany, Central Experimental Farm, **DBCEFC** Ottawa, Ontario, Canada. **DBCO** Department of Bacteriology, University of Oregon, Corvalis, Oreg. 97330 U.S.A. Department of Bacteriology, Faculty of Medicine, **DBFU** Fouad Ier, University Kasr-el-Aini, Le Caire, Le Caire, United Arab Republic. Department of Botany, R.G. Lar Medical College, **DBLMC** Calcutta, India. **DBPU** Department of Biological Sciences, Purdue Uni-

versity, Lafayette, Ind. 47902 U.S.A.

DBUN

DBUNC

DBUP

DFP DHI

DIA

DIFCO DINR

DIPC

DMG

DMIA

Department of Bacteriology, University of Nebraska, Lincoln, Neb. 68501 U.S.A.

Department of Botany, University of North Carolina, Chapel Hill, N.C. 27514 U.S.A.

Department of Biology, Medical Faculty, Palacky Universitý, Olomouc 5, Czechoslovakia.

Division of Forest Products, Melbourne, Australia. Former Dairen Hygienic Institute.

Institute of Animal Industry, Brazil, S.A.

Difco Laboratories, Detroit, Mich. 48226 U.S.A. Section of Natural Resistance, Division of Plant Immunology, Institute of Phytotechnology M.A.G., Argentina, S.A.

Section of Cultivable Pathogenic Fungi, Division of Plant Immunology, Institute of Phytotechnology M.A.G., Argentina, S.A.

Department of Microbiology, University of Guelph, Guelph, Canada.

Department of Microbiology, Institute of Agronomy, Héverle, Belgium.

DMUR Department of Mycology, University of Recife, Recife, Brazil, S.A. DPP Department of Plant Pathology, Institute of Experimental Botany, Czechoslovak Academy of Sciences, Na Karlovce 1, Prague 6, Czechoslovakia. Kanpur Culture Collection, Defense Research DRL(M) Laboratory (Materials), P.B. 320, Kanpur, Uttar Pradesh. India. An acronym of unknown derivation. Also Rhone-DS Poulenc. See RP. Department of Scientific and Industrial Research. DSIR Auckland, New Zealand. Department of Scientific and Industrial Research, England. Defence Standard Laboratories, Australia. DSL School of Medicine, Duke University, Durham, DUSM N.C. 27701 U.S.A. National Agronomic Station, Lisbon, Portugal. EAN National Agronomic Station, Savanac, Portugal. **EANSP** EAP Piracicaba School of Agriculture, San Pablo, Brazil, ECA Department of General Microbiology, College of Agriculture, University of Edinburgh, West Mains Rd., Edinburgh 9, Scotland. Economic and Social Council of the United **ECOSOC** Nations. Experiment Station of Arroz, Gravatai, Brazil, S.A. EEAG EECC Central Experimental School, Castelar, Argentina, S.A. Experiment Station, Osorio, Brazil, S.A. EEO **EEPT** Experiment Station of Pomiculture, Toquari, Brazil, S.A. Experiment Station of Silviculture, Santa María, EESSM Brazil, S.A. Station of Agricultural Phytopathology, La EFA Coruma, Spain. The Estonian Research Institute for Agriculture EIAM (MANE) and Soil Improvement, Tallinn, Est.S.S.R. Eli Lilly and Company, Indianapolis, Ind. 46206 Eli Lilly U.S.A. See also Lilly. East Malling Research Station, Kent, England. **EMRS ENAP** National School of Agriculture, La Molina, Apartado 456, Lima, Péru, S.A. Herbarium of the National Polytechnic Institute, **ENCB** Mexico, D.F.

Department of Microbiology, University of Con-

cepción, Casillo 272, Concepción, Chile, S.A.

DMUC

(MENNHE)

Estonian Scientific Research Institute of Agriculture and Soil Improvement. g. Saku, Khar'yuskii r-n, Est.S.S.R.

ENSCU

National School of Health, University City, Madrid, Spain

ERDC

Engineering Research and Development Center, U.S. Army, Fort Belvoir, Va. 22060 U.S.A.

ESA

Vicosa Higher School of Agronomy, Minas Gerais, Brazil, S.A.

ESAH ESAP National Institute of Animal Health, Tokyo, Japan. Luiz de Queiroz Higher School of Agriculture, Piracicaba, San Pablo, Brazil, S.A.

Est.Agr.Nac. ETAV

National Agronomic Station, Sacavém, Portugal. Technical School of Agriculture, Viamão, Brazil, S.A.

ETH

Institute for Special Botany, Confederated Technical University, Universitätstr. 2, Zürich 6, 8000, Switzerland. *Also* ETH-M and ETHZ.

ETH-M ETHZ ETU See ETH. See ETH.

Faculty of Engineering, Tokyo University, Tokyo,

EVEC

Experiment Station of Viticulture and Enology, Caxias do Sul, Río Grande de Sur, Brazil, S.A.

EVEV

Villafranca del Penades Station of Viticulture and Enology, Spain.

EVOWG

Confederated Research Institute for Fruit, Wine and Horticulture, Wädenswil, Switzerland. *Also* EVWS.

EVWS

See EVOWG.

FAO

Food and Agriculture Organization of the United Nations, Roma, Italy.

FAT

See ACTU.

FAU

Faculty of Agriculture, Utsunomiya University, Japan.

FAUK

Faculty of Agriculture, University of Kyoto, Kyoto, Japan.

FAVBA

Agronomy and Veterinary Faculty, Buenos Aires, Argentina, S.A.

FBRI

Biochemical Research Institute, Kalevenkatu 56 B, Helsinki 18, Finland.

FCTU

Institute of Forest Chemistry, Department of Forest Products, Faculty of Agriculture, Tokyo University, Tokyo, Japan.

FDA

U.S. Food and Drug Administration, 7th and Jefferson Drive S.W., Washington, D.C. 20204 U.S.A.

FEFQ

Fermentations and Enology, Faculty of Chemistry, Montevideo, Uruguay, S.A.

Experiment Station of Forestry of Hokkaido, FEH Sapporo, Japan. FERM Fermentation Research Institute, Agency of Industrial Science and Technology, Ministry of Industrial Trade and Industry, Chiba, Japan. FERM-P is acronym for patent deposition strains. **FES** Government (or National) Forest Experiment Station, M.A.F., 770-4, Shimomeguro, Meguroku, Tokyo, Japan. **FGSC** Fungal Genetics Stock Center, Humboldt State College Foundation, Arcata, Calif. 95521 Farbwerken Hoechst Aktiengesellschaft, Frank-FH furt/Main-Hoechst, Germany. Also FHP. **FHP** See FH. **FHSP** Faculty of Hygiene, San Pablo, Brazil, S.A. Tree Botany Institute, Eberswalde, East Germany. FIE FIL Leningrad Pharmaceutical Institute, P-22, ul. (ФИЛ) Popova 14, Leningrad, U.S.S.R. FIUG Tree Botany Institute, University of Göttingen, Göttingen, Germany. Farmitalia Microbiological Research Laboratory, FLRM Milano, Italy. **FMJ** Faculty of Medicine, Juntendo University, Tokyo, Japan. **FMP** Faculty of Medicine, Paris, France. Mycology Laboratory, Faculty of Medicine, Uni-**FMSP** versity of Sao Paulo, Caixa Postal 2921, São Paulo or San Pablo, Brazil, S.A. Faculty of Medicine, University of Tokyo, Tokyo, **FMT** Japan. Faculty of Pharmacy, Paris, France. **FPhP** Forest Products Research Laboratory, Princes **FPRL** Risborough, Bucks, England. **FQIA**

Faculty of Industrial Chemistry and Agriculture, National University del Litoral, Santa Fé, Argentina, S.A.

Fermentation Research Institute, Agency of In-**FRAIST** dustrial Science and Technology, Tokyo, Japan.

Food Research Institute, Ministry of Agriculture and Forestry, Tokyo, Japan.

or

Research Institute for Refrigeration, Bratislava, Czechoslovakia.

or

Forest Research Institute, Dehradun, India. Fermentation Research Institute Patent Collection, Fermentation Research Institute, Ministry of International Trade and Industry, Inage-higashi, Chiba, Japan.

FRI

Research Institute for Food Science, Kyoto **FSK** University, Kyoto, Japan. **FSP** Faculty of Science, Paris, France. Faculty of Science, University of Tokyo, Tokyo, FST Japan. Tokyo Laboratory, Fujisawa Pharmaceutical **FUJI** Industry, Ltd., 957-3, Nukui-Kita-machi, Koganei-city, Tokyo, Japan. FYU Department of Fermentation Industries, Yamanashi University, Motoganagi-cho, Kofu-shi, Yamanashi-ken, Japan. GB Chair of Microbiology, Faculty of Agronomic Sciences, Gembloux, Belgium. **GBE** Gumma Brewing Experiment Station, Maebashi, Japan. **GCMH** Mycological Herbarium of Ghana. **GCRI** Glasshouse Crops Research Institute, Littlehampton, Sussex, England. Genf Chodat Collection, Genf, Switzerland. Government Experiment Station of Hygiene, **GESH** Tokyo Japan. GIB Research Institute of Brewing, Tax Administration Agency, Takinogawa 2-6, Kita-ku, Tokyo 114, Japan. May be BSRI or RIB. GKI National Institute of Medical and Biological Preparation. L.A. Tarasevkha Ministry of Public (ГКИ) Health Service, G-2, Sivtsev-Vrazhek, 41, Moscow, U.S.S.R. Glaxo Research Ltd., Sefton Park, Stoke Poges, **GLAXO** Buckinghamshire, England. See also GLMI. Glaxo Laboratories, Ltd., Greenford, Middlesex, GLMI England. See also GLAXO. Government Research Institute of Formosa. Now **GRIF** defunct. GU Applied Mycological Laboratory, College of Agriculture, Gifu University, Gifu, Japan. HAC Hyogo University of Agriculture, Sasayama, Japan. Research Laboratories, Hindustan Antibiotics, Ltd., HACC Pimpri Poona, 18, India. See also ARCH.

Hankey Culture Collection, Colonial Micro-Hankey biological Research Institute, Port-of-Spain, Trinidad, B.W.I. Also Hankey HCC and HCC. The Hankey Collection is no longer in existence.

Hankey HCC See Hankey. HBL

The Hartley Botanical Laboratory, University of Liverpool, Liverpool, England.

HCB Herbarium of the Congo. HCC

See Hankey.

HCIO Herbarium Cryptogamie Indiae Orientalis, Division

of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi, India.

HFES Hiroshima Fermentation Experiment Station,

Hiroshima, Japan.

HI Haffkine Institute, Bombay, India.

HIM Hygiene Institute and Medicinal Research Service,

University of Marburg, Marburg, Germany.

HIR Food and Fermentation Division, Hokkaido Pre-

fectural Industrial Research Institute, Sapporo,

Japan.

HMS Hopkins Marine Station of Stanford University,

Pacific Grove, Calif. 93950 U.S.A. Also

HMSSU.

HMSSU See HMS.

Hoffmann La Roche Inc., Nutley, N.J. 07110

U.S.A.

HRIRMH Walter and Eliza Hall Research Institute, Royal

Melbourne Hospital, Melbourne, Australia.

HSLP Saint Louis Hospital, Paris, France.

HUT Department of Fermentation Technology, Faculty

of Engineering, Hiroshima University, 3-Chôme, Senda-Machi, Hiroshima City, 730, Japan.

IAB ICSU Abstracting Board.

IABH Bello Horizonte Agronomic Institute, Minas Gerais,

Brazil, S.A.

IAC Campinas Agronomic Institute, San Pablo, Brazil,

S.A

IACOMS International Advisory Committee on Marine

Sciences.

Adolfo Lutz Institute, São Paulo, Brazil, S.A.

IA Louvain Agronomy Institute, Louvain, Belgium.

IAM Institute of Applied Microbiology, University of

Tokyo, Mukogaoka I-I-I or 1-chôme Yayoi-cho,

Bunkyo-ku, Tokyo, Japan.

IAMB International Association of Microbiologists

(superseded by IAMS).

IAMS International Association of Microbiological

Societies.

IAMUT Faculty of Agriculture, Hokkaido University,

Sapporo, Japan.

Indian Agricultural Research Institute, New Delhi,

India.

IAUM Institute of Agriculture, University of Minnesota,

Minneapolis, Minn. 55455 U.S.A.

Institute of Antibiotics, University of Recife, Recife,

Pernambuco, Brazil, S.A.

Institute of Antibiotics, ul. Staroscinska 5, Warsaw

12, Poland.

São Paulo Biological Institute, São Paulo, Brazil, IB S.A. or San Pablo Biological Institute, San Pablo, Brazil, or Institute of Biophysics, Czechoslovak Academy of Sciences, Královopolska 135, Czechoslovakia. Asunción Bacteriological Institute, Asunción, IBA Paraguay, S.A. Institute of Biology, Czechoslovak Academy of **IBCAS** Sciences, Prague, Czechoslovakia. Institute of Biophysics, U.S.S.R. Academy of IBFI Sciences, V-133, ul. Profsoyuznaya 7, Moscow, (ИБФИ) U.S.S.R. Institute of Soil Fertility, Oosterweg 41, Haren, **IBG** Groningen, Netherlands. Botanical Institute, Geneva, Switzerland. Institute for Botany, Fermentation Physiology and **IBGH** Yeast Pure Culture of the Teaching and Investigations Establishment for Wine, Fruit and Horticulture, Geisenheim am Rhein, Germany. **IBL** Botanical Institute, Lisbon Faculty of Sciences, Lisbon, Portugal. Institute of Bacteriology, Lyon, France. **IB** Lyon Laboratory of Mycology, Malbrán Bacteriological IBM Institute, Vélez Sarsfield 563, Buenos Aires, Argentina, S.A. Now known as National Institute of Microbiology. International Biological Program. IBP **IBSC** Institute of Bacteriology, Santiago, Chile, S.A. **IBSIC** Institute of Biology and Serotherapy, Cajal Institute, Madrid, Spain. IBSS Institute of Bacteriology, Stockholm, Sweden. **IBUB** Botanical Institute, University of Basle, Basle, Switzerland. **IBSP** Butantan Institute, San Pablo, Brazil, S.A. ICA Laboratory of Microbiology, Section of Viticulture,

Institute of Cercetari Agronomy, Bucharest, Romania.

Institute of Cercetari Agronomy, Bucharest,

Romania.

ICAR

ICCC -I

ICCC-II

First International Conference on Culture Collections, held in Tokyo, Japan, October 7-11, 1968.

Second International Conference on Culture Collections, held in São Paulo, Brazil, S.A., July 15-20, 1973.

ICI Butterwick Research Laboratories, Imperial Chemical Industries, Ltd., Welwyn, Herts, England. ICIA International Center of Information on Antibiotics. 32 Blvd. de la Constitution, Liège, Belgium. ICI Nobel Div. Imperial Chemical Industries, Ltd., P.O. Box 25, Alderley Park, Macclesfield, Cheshire, England. **ICPB** International Collection of Phytopathogenic Bacteria, Davis, Calif. 95616 U.S.A. ICQ Institute of Clinical Surgery, Clinical Hospital, Buenos Aires, Argentina, S.A. International Cell Research Organization. **ICRO** Imperial College of Science & Technology, London, ICST England. International Council of Scientific Unions. **ICSU** IDPL Indian Drugs and Pharmaceuticals, Ltd., Virbhadra (Rishikesh) U.P., New Delhi, India. Institute of Epidemiology and Bacteriology, Prague, IEB Czechoslovakia. Institute of Clinical Surgery, Spain. **IEBR** Spanish Institute of Radicicola Bacteriology, Barcelona, Spain. Exequiel Dias Institute, Bello Horizonte, Minas IED Gerais, Brazil, S.A. IEH Hokkaido Industrial Experiment Station, Sapporo, Japan. Instituto Experimental de Investigaciones y IEIF Fomento Agricóla Ganadero, Santa Fé, Argentina, S.A. Institute of Epidemiology and Microbiology, IEM Srobarava 48, Prague 10, Czechoslovakia. Also IEMP, IEMUEMand UEM. **IEMP** See IEM. See IEM. **IEMUEM** International Federation of Culture Collections (a **IFCC** subsidiary of IAMS, but no longer in existence). Estanzuela Phytotechnical Institute, Colonia, IFEU

Uruguay, S.A.

Institute for Food Microbiology, Chiba University, 113-4, Okubo, Narashino-city, Chiba or 3-9-1 Izumi-cho, Narashino-shi, Chiba-ken, Japan.

Institute for Microbiology, Humboldt University, Berlin, East Germany.

Institute for Fermentation, 54-4, Nishino-machi, Juso, Higashiyodogawa-ku or 4-54 Nishino-cho, Juso, Higashiyodogawa-ku or Juso Nishinomachi, Higashiyodogawa-ku, Osaka, Japan.

IFO

IFM

IGC **IGOF** IH. IH Basle **IH Berne IH Budapest IHFM** IHL IHM **IH Milano IHMU IH Perugia IH Pisa** IHR IHS **IHUP IHUT** IID

IIEM

IISR **IJMARI**

111.

IM

IMA

Center of Biology, Gulbenkian Institute of Science, Oeiras, Portugal.

Allied Biological Establishment for Soil and Forest Husbandry, Institute for Cereal, Oil Plants and Forage Plant Diseases, 2305 Kiel-Kitseberg, Germany.

Institute of Hygiene, Warsaw, Poland. Institute of Hygiene, Basle, Switzerland. Institute of Hygiene, Berne, Switzerland. Institute of Hygiene, Budapest, Hungary.

Institute of Hygiene, Frankfort am Main, Germany. Institute of Hygiene, Lausanne, Switzerland.

Laboratory of Mycology, Faculty of Medicine, Montevideo Institute of Experimental Hygiene, Avda. A. Ricaldoni 3051, Montevideo, Uruguay,

Institute of Hygiene, Milano, Italy.

Institute of Hygiene, Montevideo, Uruguay, S.A.

Institute of Hygiene, Perugia, Italy. Institute of Hygiene, Pisa, Italy. Institute of Hygiene, Rome, Italy.

Institute of Hygiene, Strasbourg, France.

Institute of Hygiene, University of the Philippines, Manila, Philippines.

Institute of Hygiene of the University, Istanbul, Turkey.

Institute of Hygiene, University of Vienna, Vienna, Austria.

Institute for Infectious Diseases, University of Tokyo, 1-39 or 1-Chôme Shiba-Shirokanedaimachi, Minato-ku or 1-Chôme, Shiroganedai, Minato-ku, Tokyo, Japan. (Formerly The Institute of Medical Science, University of Tokyo.)

Indian Institute for Experimental Medicine, Calcutta, India.

Indian Institute of Sugar Research, Kanpur, India. Indian Jute Mills Association Research Institute. Calcutta, India.

Department of Plant Pathology, University of Illinois, Urbana, III. 61801.

Inoculation Manufactory, Strančice, Czechoslovakia.

Microtheque, Mêrieux Institute, France.

Chair of Bacteriology, Agronomic and Veterinary Faculty, Institute of Agricultural Microbiology, M.A.G., Frederico Laxrose 2154, Buenos Aires, Argentina, S.A. or Institute of Microbiology and Agropecurios Industry, I.N.T.A., Castelar, B.A., Argentina, S.A. See IAMB. Also I.M.I.A.

IMAB See IMA. IMAN Institute of Microbiology, U.S.S.R. Academy of (HAMN) Sciences, Moscow, U.S.S.R. Rare, usually INMI. **IMASP** Museum of Cultures, Institute of Mycology, Academy of Sciences of People's Republic of China. Peking, China. **IMAT** Institute of Agricultural and Technical Microbiology, Perugia, Italy. **IMATUN** Institute of Agricultural and Technical Microbiology, University of Naples, Naples, Italy. IMB Institute of Microbiology and Biochemistry, Maria Curie Shlowdowska University, Lublin, Poland. IMC IMC Culture Collection, Growth of Sciences Center, International Minerals and Chemical Corporation, Libertyville, III. 60048 U.S.A. Institute of Microbial Chemistry, 3-14-23 Kamiosaki, Shinagawa-ku, Tokyo, Japan. Institute of Microbiology, Czechoslovak Academy **IMCAS** of Sciences, Na cvičišti 2, Prague, Czechoslovakia. IMET Institute for Microbiology and Experimental Therapy, Beuthenbergstrasse 11, Jena 69, East Germany. Imperial Mycological Institute, Kew, England. See IMI CMI. Also IMI CMI. See IMA. IMIA See IMI. IMI CMI Institute of Microbiology and Virusology, Kazakh IMIV Academy of Sciences, Kirova 103, Alma-Ata, (ИМИВ) Kaz. S.S.R. Also IMiV. or (ИМЦВ) Institute of Medical Research, Malaya. IMRM Institute of Microbiology, Rutgers-The State Uni-**IMRU** versity, New Brunswick, N.J. 08903 U.S.A. Institute of Microbiology, Sofia, Bulgaria. IMS IMT Institute of Tropical Medicine, Basle, Switzerland. **IMTPL** Prince Leopold Institute of Tropical Medicine, Anvers, Belgium. **IMUNT** Institute of Microbiology, University of Tucumán, Tucumán, Argentina, S.A. Also IMUT. Institute of Mycology, University of Recife, Recife, **IMUR** Brazil, S.A. **IMUT** See IMUNT. **IMVS** Institute of Medical and Veterinary Science,

Adelaide, Australia.

Moscow, U.S.S.R.

Institute of Animal Morphology, ul. Vavilova, 12,

IMZH

(ЖММ)

IN

INA (ИНА) INBVV (ИНБВВ)

INBYUM (ИНБЮМ)

IMMI (WHMU)

INMIA INMIArm. (ИНМИАрм.)

INRA

INTA

IOC

ΙP

IPA (ИПА)

IPA

IPAlger IPB IPBD

IPCR

Research Institute, Ihara Noyaku Company, Ltd., 1000 Shibukawa, Shimizu-Shi, Shizuoka-ken, Japan.

Institute for Research on New Antibiotics, Bolshaia Pirogovskaia 11, Moscow, U.S.S.R. *Also* IRNA.

Institute of Biology of Inland Waters, Borok, Nikouzskii District, Yaroshalskoi Region, U.S.S.R.

Institute of Biology of the Southern Seas, Academy of Sciences, Ukranian S.S.R., Sevastopol, Ukr.S.S.R.

Institute of Microbiology, U.S.S.R. Academy of Sciences, Profsojuzanaja 7, Moscow B-133, U.S.S.R. See IMAN.

See INMIArm.

Institute of Microbiology, Academy of Sciences, Armenian S.S.R., ul. Charentsa, 19, Erevan, Arm.S.S.R.

National Institute of Agronomic Research, Paris, France.

Institute of Plant Pathology, National Institute of Microbiology, Castelar, Argentina, S.A.

or

National Institute of Agropecuria Technology, Buenos Aires, Argentina, S.A.

Laboratory of Mycology, Oswaldo Cruz Institute, Caixa Postal 926, Río-Est, Guanabara, Rio de Janeiro, Brazil, S.A.

Institut Pasteur Institute, Docteur Roux, 25, Paris 15, France. *Also* IPPF and IPP.

or

Department of Insect Pathology, Institute of Entomology, Prague, Czechoslovakia.

Institute of Soil Management and Agrochemistry, Academy of Sciences, Azerbaijan S.S.R., 6-ya Khrebtovaya, 5, Baku, Az.S.S.R.

Institute of Pedology and Agochemistry, Beograd-Topčider, FNR, Yugoslavia.

or

Institute for Phytopathology, Aschersleben, Germany.

Pasteur Institute, Alger, Algeria.
Pasteur Institute, Brussels, Belgium.

Commonwealth Bureau of Plant Breeding and Genetics, School of Agriculture, Cambridge, England. See CPBG.

Institute for Physical and Chemical Research, 31, Komagome-Kamifujimae-cho, Bunkyo-ku *or* 2-28-8 Honkomagome, Bunkyo-ku, Tokyo, Japan.

IPD Pasteur Institute, Dakar, French East Africa.

IPF Institut przemyslu fermentacijinego, Warsaw,

Poland.

IPFM Institute of Parasitology, Faculty of Medicine,

Paris, France.

IPH National Institute of Public Health, Tokyo, Japan.

IPL Pasteur Institute, Lyon 69, France.
IPLille Pasteur Institute, Lille, France.
IP Lisbon Pasteur Institute, Lisbon, Portugal.
IPM Pasteur Institute, Casablanca, Morocco.

IPO Institut voor Plantenziektenkundig Onderzoek.

Wageningen, Netherlands.

IPP See IP.
IPPF See IP.

IPPP Institute for Plant Physiology, University of Prague,

Prague, Czechoslovakia.

IPPretoria Institute of Pathology, Pretoria, Union of South

Africa.

IPR Institute of Parasitology of the University, Rome,

Italy.

IPT Pasteur Institute, Túnez, Africa.

IPV Institute of Plant Pathology, University of Milano,

Via Celoria 2, 20133, Milano, Italy. Also IPV

(M) and IPVM.

IPVM See IPV.
IPV (M) See IPV.

IPV (Pisa) Institute of Plant Pathology, Pisa, Italy.

IPZ Institute of Soil Science, Teodora Drajzera

7, Beograd, Yugoslavia.

Ramon y Cajal Institute, Madrid, Spain.

Robert Koch Institute, Berlin, Germany.

IRNA See INA.

ISC International Salmonella Center.

ISC Iowa State College, Ames, Iowa 50010 U.S.A.

Also ISU.

ISET Institute of Health and Tropical Diseases, México,

D.F., México.

ISN Institute of Natural Sciences, Ciudad Universitaria,

Bogota, Columbia, S.A.

ISP International Streptomyces Project, Ohio Wesleyan

University, Delaware, Ohio 43015 U.S.A.

ISR Istituto Superiore di Sanite, Rome, Italy. Also ISSR.

Institute of Soil Research & Agrochemistry,

Hungarian Academy of Science, Herman Otto

út 15, Budapest II, Hungary.

ISSR See ISR.

ISTD Danish Institute of Sero-therapy, Copenhagen,

Denmark.

ISRA

Indian Sugar Technological Institute, Kanpur, ISTI India. Institute of Science & Technology, University of ISTTU Tokyo, Tokyo, Japan. Department of Agronomy, Iowa State University, ISU Ames. Iowa 50010 U.S.A. Institute of Plant Health, M.A.G., Argentina, S.A. ISV State Institute of Serums and Vaccines, Hessarak-ISVI Karadj, Iran. Scientific Research Institute of Horticulture, Grape ISVV Growing and Winemaking, Kishinew, U.S.S.R. (ИСВВ) Institute of Technology, Buenos Aires, Argentina, ITBA Indian Type Culture Collection, Division of **ITCC** Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi 12, India. Indian Type Culture Collection of Fungi, Indian **ITCCF** Agricultural Research Institute, New Delhi 12, India. ITH Institute of Tropical Hygiene, Amsterdam, Netherlands. ITK Institute of Tuberculosis, Kyoto University, Mukaharmachi, Shogoin, Sakyo-ku, Kyoto, Japan. IU The Culture Collection of Algae, Indiana University, Bloomington, Ind. 47401 U.S.A. International Union of Biochemistry. IUB IUBS International Union of Biological Sciences. **IUNG** Instytut Uprawy, Nawózenia i Gleboznowsta, Pulawy, Poland. **IUNS** International Union of Nutritional Sciences. **IUPAB** International Union of Pure and Applied Biophysics. International Union of Pure and Applied Chemistry. **IUPAC IVBP** Veterinary Institute of Bacteriology and Parasitology, University of Berne, Berne, Switzerland. IVL Veterinary Institute, Lausanne, Switzerland. IZ Fermentation Institute, University of São Paulo, Caixa Postal 56, Piracicaba, São Paulo or San Pablo, Brazil, S.A. IZS Institute of Experimental Zooprophylactics, Teramo, Italy. JARA Japan Antibiotic Research Association, Tokyo, **JARI** Jute Agricultural Research Institute, Barackpore, Cuttack, India.

JCC

Biology Department, Agricultural Institute, John-

stown Castle, Wexford, Ireland.

2nd Research Center, Development & Research JDA H.Q., Japan Defense Agency, 9, Ikejiri-cho, Setagayu-ku, Tokyo, Japan. The Japanese Federation of Culture Collections **JFCC** of Micro-organisms, Institute for Infectious Diseases, University of Tokyo, Shiba-shiroganedaimachi, Minato-ku or Institute of Applied Microbiology, University of Tokyo, Bunkyo 8-ku, Tokyo, Japan. Johns Hopkins University, Baltimore, Md. 21205 JHU U.S.A. **JMCH** Japan Monopoly Corporation, Hatano Tobacco Institute, Kanagawa, Japan. JNAU Department of Soil Science and Agricultural Chemistry, J.N.A.U., P.B. No. 80, Krishinangar, Jabalpur, India. Kaken Chemical Company, Ltd., 31 Komagome, Kaken Kamifujimae-cho, Bunkyo-ku, Tokyo, Japan. See also KCC and KChC. Kayaku Antibiotics Research Company, 8-2 chôme, Kayaku Funado-cho, Itabashi-ku, Tokyo, Japan. **KBPMGU** Department of Biology, Faculty of Biology, M.V. (КБПМГЧ) Lomonosova Moscow National University, Leninsky gory., Moscow, U.S.S.R. KCC Culture Collection of Actinomycetes, Kaken Chemical Company, Ltd., 6-42, Jujodai 1-Chôme, Kitaku or 31, Komagome, Kamifujimae-cho, Bunkyoku, Tokyo 114, Japan. See also Kaken and KChC. **KChC** See KCC. Laboratory of Comparative Biology, Karsir Founda-**KFRI** tion Research Institute, Richmond, Calif. 94802 U.S.A. Kishinevsy National University, g., Kishinev, ul. KGU Pirogova, 65, U.S.S.R. (КГЧ) Kharbkovsky National University, ul. Universite-KHGU tskaya, 16, Kharbkov, U.S.S.R. (XTY) Kobe Hygienic Laboratory, Hyogo, Japan. KHL Regional Public Health Laboratory Service or KHS Regional Hygienic Stations, Czechoslovakia. KI The Kitasato Institute, 138 Shirokane, Sanko-cho, Minato-ku, Tokyo, Japan. See KIID. Also KITA. KIID Department of Antibiotics, Kitasato Institute, Shiba, Shirogane, Sanko-cho, Minato-ku, Tokyo, Japan.

See Kl. Also KITA.

KITA KMMGU (KMMГЧ)

KNG & SF

See KIID.

Department of Microbiology, Faculty of Biology,
M. V. Lomonosova Moscow National University,
Leninskie gory., Moscow, U.S.S.R.

Koninklijke Nederlandsche Gist en Spiritusfabriek N.V., or Gist-Brocades N.V., Delft, Netherlands.

KNRMGU (KHPMГЧ) Department of Lower Plants, Faculty of Biology, M.V. Lomonosova Moscow National University, Leninskie gory., Moscow, U.S.S.R.

KPUM

Medical Microbiological Department, Kyoto Prefectural University, Kyoto, Japan.

Král

The Král Collection, one of the first collections of living microorganisms which operated in modern fashion. This collection ceased to exist in 1942.

KSE

Kagawa Shoyu Experimental Station, Tokushima, Japan.

KTH KUT Royal Technical High School, Stockholm, Sweden. Faculty of Engineering, Kansai University, Osaka, Japan.

KY

Tokyo Research Laboratory, Kyowa Hakko Kogyo Company, Ltd., Tokyo, Japan.

KYA

Laboratory of Zymotic & Industrial Fermentations, Faculty of Agriculture, Kyushu University, Fukuoka, Japan. *Also* KYU.

KYM

Faculty of Medicine, Kyushu University, Fukuoka, Japan.

KYU

See KYA.

LAKTOFLORA

Research Laboratories of the Dairies, Association for the Production of Pure Milk Cultures, Laktoflora, Ke dvoru 2, Prague 6, Czechoslovakia.

LAPP

Laboratory for Anatomy and Physiology of Plants, J.E. Purkyně University, Kotlářská, 2, Brno, Czechoslovakia.

LBG

Institute for Agricultural Bacteriology and Fermentation Biology, Confederated Technical High School, Zurich, Switzerland.

LBIH

Landbouwproefstation en Bodemkunding Institut, T.N.O. Groningen, Netherlands.

LBL

V.I. Lenin Laboratory Library, G-19, ul., Kalinina 3, Moscow, U.S.S.R.

(ЛБЛ) LBPB

Laboratory of Bacteriology and Parasitology, Faculty of Medicine, University of Bruxelles, Brussels, Belgium.

LC

See LCP.

LCD LCF Carlsberg Laboratory, Copenhagen, Denmark.
Central Laboratory of Phytopathology, Buenos
Aires, Argentina, S.A.

LCI

Italian Cryptogamic Laboratory, Botanical Institute, University of Pavia, Pavia, Italy. See LCPI.

LCP

Laboratory of Cryptogamy, National Museum of Natural History, 12 Rue de Buffon, Paris (5°), France. *Also* LC, MP, PC, LC(P), Mycotheque, and MNHN.

LC(P)

See LCP.

LCPI

Cyptogamic Laboratory, Pavia, Italy. See LCI.

Lederle Laboratories, Division of American Lederle Cyanamid Company, Pearl River, N.Y. 10965 U.S.A. Lepetit S. p. A., Via Roberto Lepetit 8, Milano, Lepetit Laboratory of Fermentology, Alfred Jörgenson, LFCD Copenhagen, Denmark. LGU Department of Microbiology, Leningrad National (ЛГЧ)University, Universitetskaya nab., 7/9, Leningrad, U.S.S.R. Museum of Cultures, Leningrad Research Institute LIA (ЛИА) of Antibiotics, 32 Ogorodnikov Prospect, Leningrad L-20, U.S.S.R. Leningrad Institute of Antibiotics, Ogorodnikova LIAN (ЛИАН) dr. 23, Leningrad, U.S.S.R. Eli Lilly and Company and The Lilly Research Lilly Laboratories, Indianapolis, Ind. 46206 U.S.A. Laboratory of Insect Pathology, University of LIP California, Berkeley, Calif. 94701 U.S.A. LKB Laboratory of Kodama Brewing Company, Itagawa machi, Akita Prefecture, Japan. LIA Department of Microbiology, Latvian Academy of Agriculture, Jelgava, Latvia, U.S.S.R. Laboratory for Microbiology, Delft, Netherlands. LM Laboratory of Microbiology, University of Wagen-LMW ingen, Wageningen, Netherlands. Institute of Chemistry of Natural Products, Moscow, LNGI (ЛНГИ) U.S.S.R. LP Mycothèque, Laboratory of Parasitology, Faculty of Medicine, Paris, France. LPS Sociente Anonyme: Les Produits Organiques du Santerre Orsan, Paris, France. Laboratorio de Química Agricola. LQA Leather Research Institute, Otrokivice, Czechos-LRI lovakia. London School of Hygiene and Tropical Medicine, LSH London, England. Also LSHTM. Biochemistry Department, London School of LSHB Hygiene and Tropical Medicine, Keppel Street (Gower Street), London, WCI, England. Mycological Reference Laboratory, London LSHM School of Hygiene and Tropical Medicine, London, England. See LSH. LSHTM The Lenin State Library, Moscow, U.S.S.R. LSL (ЛСЛ)

LT Treub Laboratory, Boger, Indonesia.

LUV Ultra-virus Laboratory, Lyon, France.

MacC Department of Microbiology, Macdonald College,

Quebec, Canada.

Argentine Museum of Natural Sciences, "Ber-MACN nardino Rivadavia," Buenos Aires, Argentina, All-Union Scientific-Research Institute of Vinicul-Magarač ture and Viniculture, Magarač, Jalta, Krym, U.S.S.R. Grasslands Research Station, P. Bag 701, Maron-MAR dellas, Rhodesia. Laboratory of Industrial Microbiology, Faculty of MAUE Agriculture, Tokyo University of Education, Tokyo, Japan. Herbarium, Botanica Institute, University of MB Marburg, 355 Marburg/Lahn, Germany. Qr. Monopoly Bureau of Japan, Tokyo, Japan. Microbial Chemistry Research Laboratories, MCRL Tanabe Seiyaku Company, Limited, 2-2-50 Kawagishi Toda-shi, Saitama-ken or 3073 Shimatoda, Toda-machi, Kita-adashi-gun, Saitama-ken, Japan. Faculty of Medicine, Chiba University, Chiba, **MCU** Japan. Microbiology Department, Faculty of Natural **MDB** Sciences, J.E. Purkyne University, Brno, Czechoslovakia. MDH Michigan Department of Health, Lansing, Mich. 48914 U.S.A. MEIJI Meiji Milk Products Company, Tokyo, Japan. MEJ Ministry of Education, Mombu-sho, Japan. Merck Merck Sharp and Dohme Laboratories, Division of Merck and Company, Incorporated, Rahway, N.J. 07065 U.S.A. **MFC** Matsushima Fungus Collection, Shionogi Research Laboratory, Shionogi & Company, Limited, Fukushima-ku, Osaka, Japan. 406 MGL 406th Medical General Laboratory, U.S. Army, Zama, Japan. Millport Marine Station, Millport, Scotland. MKU Faculty of Medicine, Kanagawa University, Ishikawa, Japan. MLA Mycological Laboratory, Botany Department, Allahabad University, Allahabad, India. **MLPF**

Laboratory of Microbiology, Faculty of Agriculture,

Sarajevo, Yugoslavia.

Mount Makulu Research Station, Northern Rhodesia.

Morinaga Confectionery Company, Laboratory,

Tokyo, Japan.

MNHN See LCP.

MMRS

MNC

MO School of Medicine, Osaka University, Osaka,

Japan.

MOCU Department of Biochemistry, Osaka City Univer-

sity, School of Medicine, 2-Chôme, Asahi-machi,

Abeno-ku, Osaka, Japan. Also MOMU.

MOMU See MOCU.

Montecatini Antibiotic Research Laboratory of S.A. Monteca-

tini, Milano, Italy.

MP See LCP.

MR Mycological Herbarium of the Federation of

Rhodesia and Nyasaland.

MRE Microbiological Research Establishment, Porton,

England.

MRI Microbiology Research Institute, Central Experi-

mental Farm, Ottawa, Ontario, Canada.

MRNY Medical Research, New York, N.Y. 11101 U.S.A.

MSNZ Medical School, Dunedin, New Zealand.

MSU The Moscow State University, Moscow, U.S.S.R.

(MCY)

MW

MTHU Department of Bacteriology, Faculty of Medicine,

Tohoku University, 4 Ban-cho, Kita, Sendai City or Kita 4 Ban-cho, Sendai-shi, Miyagi-ken, Japan.

MTU Faculty of Medicine, University of Tokyo, 7-Chôme,

Hongô, Bunkyo-ku, Tokyo, Japan.

MU Laboratory of Fermentation, Faculty of Agriculture,

Mie University, Tsu, Japan.

MULg Department of Microbiology, University of Liège,

32, Boulevard de la Constitution, Liège, Belgium.

MVZ Veterinary Hygienic Laboratories, Czechoslovakia.

Mycology Division, Institute for Special Botany,

Jena, Weimar, East Germany.

Mycothegue See LCP.

NADL National Animal Disease Laboratory, Ames, Iowa,

50010 U.S.A.

NARI National Agricultural Research Institute, M.A.F.,

Tokyo, Japan.

NARI (AES) See NARI.

NBIR The National Bureau of Industrial Research,

Ministry of Economic Affairs, P.O. Box 268,

Chungking, China.

NBIRN The National Bureau of Industrial Research,

Nanking, China.

NBL Naval Biological Laboratory, Oakland, Calif.

94623 U.S.A.

NCA National Canner's Association, Washington, D.C.

20006 U.S.A.

NCDC See CDC.

NCDO National Collection of Dairy Organisms, Shinfield,

Reading, Berkshire, England.

National Collection of Industrial Bacteria, Ministry **NCIB** of Agriculture, Fisheries, and Food, Torry Research Station, P.O. Box 31, 135 Abbey Road, Aberdeen AB9 8DG, Scotland. National Collection of Industrial Microorganisms, NCIM National Chemical Laboratory, Poona 8, Maharashtra, India. National Chemical Laboratory, Division of Tech-NCL nical Services, Poona 8, India. National Collection of Marine Bacteria, Ministry **NCMB** of Agriculture, Fisheries, and Food, Torry Research Station P.O. Box 31, 135 Abbey Road, Aberdeen AB9 8DG, Scotland. National Collection of Plant Pathogenic Bacteria, **NCPPB** Plant Pathology Laboratory, Harpenden, Hertsfordshire, England. North Carolina State College, Raleigh, N.C. NCSC 27607 U.S.A. NCTC National Collection of Type Cultures, Central Public Health Laboratory, Colindale Avenue, London, N.W. 9, England. (Formerly located at the Lister Institute.) Medical School, Nagoya City University, Nagoya, NCUM Japan. NCYC National Collection of Yeast Cultures, Brewing Industry Research Foundation, Nutfield, Redhill, Surrey, England. Former National Defense Research Committee, **NDRC** Washington, D.C., U.S.A. **NDSU** Department of Bacteriology, North Dakota State University, Fargo, N. Dak. 58102 U.S.A. NEA Nobel Explosives Company, Ardeer, Scotland. NGO Non-Governmental Organizations. NGR Department of Agriculture, Stock and Fisheries, Port Moresby, Papua and New Guinea. NHL National Hygienic Laboratory *or* National Institute of Hygienic Sciences, 2-203 Tamagawa Yogamachi, Setagaya-ku, Tokyo, Japan. NI Nagao Institute, 96 Kinuta-machi, or 380 Mishuku, Satagaya-ku, *or* Kitashinagawa, Tokyo, Japan. NIAH National Institute of Animal Health, Ministry of Agriculture and Forestry, Jôsui-hommachi, Kodaira City, Tokyo, Japan. **NIAQT** National Institute for Agricultural Quality Testing, Keleti Károly u. 24, Budapest II, Hungary. NIAS Department of Soils and Fertilizers, National Institute of Agricultural Sciences, Nishigahara,

Kita-ku, Tokyo, Japan.

NIG National Institute of Genetics, Shizuoka, Mishima,

Japan.

NIH National Institutes of Health, Bethesda, Md.

20014 U.S.A. Also NIHA.

or

National Institute of Health of Japan, Tokyo, Japan.

See also NIHA and NIHJ.

NIHA See NIH.

NIHJ National Institute of Health of Japan or Depart-

ment of Antibiotics, National Institute of Health of Japan, 284, Chojamaru, 2-10 Kamiosaki,

Shinagawa-ku, Tokyo, Japan. See NIH.

NIK Nagao Institute, Kyoto Branch, Kyoto, Japan. No

longer in existence.

NIMR National Institute for Medical Research, London,

England.

NIRD National Institute for Research in Dairying, Shin-

field, Reading, Berkshire, England.

NISL Noda Industrial Science Laboratory, Noda or

Chiba, Japan.

NIST National Institute of Science and Technology.

NIVM National Institute of Veterinary Medicine, Brno,

Czechoslovakia.

NJES New Jersey Agricultural Experiment Station, New

Brunswick, N.J. 08903 U.S.A.

NLABS (QM) Pioneering Research Laboratory, U.S. Army Natick

Laboratories, Natick. Mass. 01760 U.S.A.

NPN Department of Agricultural Chemistry, Nagoya

University, Chikusa-ku, Nagoya, Japan.

NRC National Research Council, Sussex Drive, Ottawa

2, Ontario, Canada. Also NRC Canad. and NRCC.

or

National Research Centre, Ministry of Scientific Research, Sh. El-Tahrir., Dokki, Cairo, United

Arab Republic.

NRC Canad. See NRC.

NRCC See NRC.

NRRL ARS Culture Collection, Northern Regional Re-

search Laboratory, Agricultural Research Service, U.S. Department of Agriculture, 1815 N. University Street, Peoria, III. 61604 U.S.A. Formerly referred to as Culture Collection Unit, Fermentation Section, Northern Utilization Re-

search and Development Division *or* Northern Regional Research Laboratory.

NRS Collection of Nathan R. Smith, U.S. Department of Agriculture, Washington, D.C. 20250 U.S.A.

Also at ARS Culture Collection, Peoria, III.

61604 U.S.A. and IMRU.

National Science Museum, Tokyo, Japan. NSM National Type Culture Collection, Indian Institute NTCCI of Science, Bangalore, India. Norse Technical Høgskoles Collection, Depart-**NTHC** ment of Biochemistry, Technical University of Norway, Trondheim MTH, Norway. Department of Biological Sciences, North Texas NTSU State University, Box 5218, N.T. Station, Denton, Tex. 76203 U.S.A. **NUFS** Faculty of Science, Nagoya University, Nagoya, Japan. NYBG New York Botanical Garden, Bronx Park, New York, N.Y. 10458 U.S.A. New York State Department of Health, Albany, NYSDH N.Y. 12224 U.S.A. Mycological Herbarium, Department of Botany, OAC Ontario Agricultural College, Guelph, Canada. Organization for Economic Co-operation and De-OECD velopment, Paris, France. OEEC Organization of European Economic Cooperation. Superseded by OECD. OEU Tennoji Branch, Osaka University of Liberal Arts and Education, Minami-Kawabori-cho, Tennojiku or Ikedashi, Osaka, Japan. See also OUE. OEU is usual acronym. Public Health Laboratory Services or District OHS Hygienic Stations, Czechoslovakia. **OMC** Osaka Medical College, Osaka, Japan. **OMS** World Health Organization. **OPA** Faculty of Agriculture, Osaka Prefectural University, Osaka, Japan. Osaka Prefectural Hospital, Osaka, Japan. OPH Laboratory of Microbiology, Faculty of Science, ORL 45-Orleans 02, Loiret, France. Ortho Research Foundation, Raritan, New Jersey, ORTHO U.S.A. Also Ortho Res. Found. See ORTHO. Ortho Res. Found. Department of Agronomy, The Ohio State Univer-**OSDA**

sity, 1885 Neil Avenue, Columbus, Ohio 43210 U.S.A.

or

Withycombe Hall, Oregon State University, Corvallis, Ore. 97331 U.S.A.

OTHS See OUT. OUE See OEU.

OSU

See OUT.

OUS Faculty of Science, Osaka University, Osaka, Japan.

OUT Faculty of Engineering, Osaka University, Yamadaue, Suita City, Osaka, Japan. Department of Fermentation Technology, Osaka University, 9-Chôme, Higashinoda-machi, Miyakoshima-ku, Osaka, Japan. **OWMC** Department of Microbiology, Osaka Women's Medical College, Osaka, Japan. Laboratory of Cryptogamy and Algology, National **Paris** Museum of Natural History, Paris, France. Laboratory of Plant Pathology, Faculty of Agricul-**PATU** ture, Tokyo University, Tokyo, Japan. PC See LCP. Purdue Culture Collection, Department of Bio-**PCC** logical Sciences, Purdue University, Lafayette, Ind. 47907 U.S.A. Penicillin Control and Immunology Section, Food **PCI** and Drug Administration, 7th and Jefferson Drive S.W., Washington, D.C. 20204 U.S.A. PD Plantenziektenkundige Dienst, Wageningen, Netherlands. Parke, Davis & Company and Parke, Davis Research Laboratories, Joseph Campau at the River, Detroit, Mich. 48232 U.S.A. Herbarium of Plant Diseases Division, Auckland, PDD New Zealand. Charles Pfizer and Company, Groton, Conn. Pfizer 06340 U.S.A. PHL Public Health Laboratory, Albany, N.Y. 12224 **PHLS** Public Health Laboratory Service, Central Public Health Laboratory, Colindale Ave., London, NW9, England. **PIEM** Prague Institute of Epidemology and Microbiology, Prague, Czechoslovakia. PIR The N. Poushkarov Institute of Soil Science, 136 9 September Boulevard, Sofia, Bulgaria. Research Institute for the Pharmaceutical Industry, PIRI Budapest, Hungary. PL Mycotheque, Laboratory of Parasitology, Faculty of Medicine, Paris, France. PLPH Provincial Laboratory of Public Health, Edmonton, Alberta, Canada. See also UAMH. **Plymouth** Marine Biological Laboratory, Plymouth, England. **PQMD** See QM. Laboratory of Autotrophic Organisms, Czechos-Prag Iovakian Academy of Sciences, Prague, Czechoslovakia.

Plant Research Institute, Ottawa, Ontario, Canada.

PRI

Prairie Regional Laboratory, Saskatoon, Saska-PRL tchewan, Canada. Progetto Sistematica Actinomiceti, "P". Stazzi" In-**PSA** stitute, Institute of Microbiology, University of Milano, Via Mangiagalli 31 or Via Celoria 10, Milano, Italy. Biologickij ôstav Lek., Fakulty Palackeho Univer-PUO sity, Olumouc, Czechoslovakia. Collection of Cultures, Institute of Hygiene, War-PZH saw, Poland. QEC Queen Elizabeth College, London University, London, England. **QIMR** Queensland Institute of Medical Research, Herston Road, Herston, Brisbane, Queensland 4006, Australia. QM Pioneering Research Division, Quartermaster Research and Engineering Command, U.S. Army, Natick Laboratories; Quartermaster Research and Development Center; or Quartermaster Depot, U.S. Army, Philadelphia, Pa. 19104, U.S.A. Also PQMD, QMRDC, and QM QMRDC. QM is usual acronym for designation of cultures. **QM QMRDC** See QM. See QM. **QMRDC** See ARIN. RAJ RCR Rothamstead Collection of Rhizobium, Soil Microbiology Department, Rothamstead Experimental

Station, Harpenden, Hertfordshire, England.

Imperial College of Science and Technology, London University, London, England.

Rothamsted Experimental Station, Harpenden, Hertfordshire, England.

Rudolph Hugh Collection, George Washington University, Washington, D.C. 20006 U.S.A.

Rhone-Poulenc See RP.

RCS

RES

RH

RI

RIA

RIB

(РИА)

Rockefeller Institute, New York City, N.Y. 10020

Research Institute for Ampelology, Budapest, Hungary.

or USSR Research Institute for Antibiotics, Nagatinskaya ul. 3a, Moscow B-105, U.S.S.R. Also USSR RIA and VNIIA.

Research Institute of Brewing, Tax Administration Agency, 2-6 Takinogawa, Kita-ku, Tokyo 114, Japan. Also GIB and BSRI.

or

Research Institute, Borstel, Germany.

Research Institute for Brewing and Malting, Lipová RIBM 15, Prague 2, Czechoslovakia. Research Institute for Distillery and Canning In-RIDC dustry, Miletičova ul. 14b, Bratislava, Czechoslovakia. See RIDCI. Research Institute for Distillery and Canning In-RIDCI dustry. See RIDC. Research Institute of Fermentation, Yamanashi RIFY University, Kofu, Japan. See YFI. **RIJPK** Rijksdienst voor de Ijsselmeerpolders, (Ijssel Lake Polders Development and Colonization Authority) Molenstraat 28, Kampen, Netherlands. RIL Ross Institute, London, England. Research Institute for Microbial Diseases, Osaka RIMD University, Nishi-machi, Dôjima, Kita-ku or Yamadaue (Yamada-Kami), Suita City, Osaka, RIO Research Institute, Canada Agriculture, University Sub P.O., London, Guelph, Ontario, Canada. Research Institute for Refrigeration, Bratislava, RIR Czechoslovakia. Recherche et Industrie Therapeutique, 13 rue du RIT Tilleul, Genval, Belgium. Rega Institute, University of Leuven, Minderbroedersstraat, 10, Leuven, Belgium. Research Institute for Viticulture and Enology, RIVE Matuškova ul. 97, Bratislava, Czechoslovakia. **RIVM** Research Institute of Veterinary Medicine, Brno, Czechoslovakia. Institute of Research and Experimentation of RJ Centro Sul (I.P.E.A.C.S.), km 47-Via Campo Grande-ZC-26, GB, Brazil, S.A. RLL Research Laboratories, Lepetit S.p.A., Milano, Italy. Also RLLM. **RLLM** See RLL. Rocky Mountain Laboratory, Hamilton, Mont. RML 59840 U.S.A.

Roussel Research Center (U.C.L.A.F.), III route de Noisy, Romainville, Seine, France. *Also* UCLAF.

Societé des Usines Chimiques, Rhône-Poulenc, 9 quai Jules Guesde, a Vitry s/Seine, Seine or 22 Avenue Montaigne, Paris 8, France. DS is used as an acronym for strain designations. *Also* Rhone-Poulenc and DS.

RRIC Rubber Research Institute, Ceylon.
RRIM Rubber Research Institute, Malaya.

RSA Rancho Santa Ana Botanic Garden, Claremont, Calif. 91711 U.S.A.

RP

Research Laboratories, Takeda Chemical Indus-RTCI tries, Ltd., 27 Dosho-machi, 2 Higashi-ku, Osaka, Japan. Research and Training Institute, Mlingano, Private RTM Bag, Ngomeni, Tonga, Tanzania. Laboratory of Phytopathology, Institute of Plant SAN Health, Paseo Colon 922, 2° Piso, Buenos Aires, Argentina, S.A. SANK See Sankyo. Central Research Laboratories, Sankyo Company, Sankyo 2-58, 1-chôme, Hiro-machi, Shinagawa-ku, Tokyo, Japan, Also SANK. Agronomy and Enology Station, Bordeaux, France. SAOE Microbiology Section, Plant Protection Research SARC Institute, Private Bag 134, Pretoria, Union of South Africa. Research Laboratory of Dairy Science, Snow SBMP Brand Milk Products Company, Ltd., Sapporo, Japan. Squibb Institute for Medical Research, New SC Brunswick, N.J. 08903 U.S.A. Also Squibb. Schenley Laboratories, Inc., Lawrenceburg, Ind. Schenley 47025 U.S.A. SCIBP Special Committee for the International Biological Program. SEATO Medical Research Laboratory, Bangkok, SEATO Thailand. Fruittree Culture Substation, Farraouphila, Brazil, SEFF Section of Agricultural Microbiology, Secretary of SEMIA Agriculture, Porto Alegre Rs, Brazil, S.A. Sericultural Experimental Station, Tokyo, Japan. SES Federal Station for Testing Cultures, Lausanne, SFC Switzerland. Federal Station for Viticultural and Arboricultural SFEV Testing, Lausanne, Switzerland. Phytopathological Service, Secretary of Agricul-SFPA

ture, AV. Julio de Castillos 585, Porto Alegre, Rio Grande do Sul, Brazil, S.A.

General Water Society, Barcelona, Spain.

See SRL. Shionogi See SRL.

SGC SHIO

SIF

SIO

SIFF

SIES Shimane Industrial Experimental Station, Matsue,

Statens Institutt for Folkchelse, Oslo, Norway, National Institute of Public Health, Oslo, Norway. Scripps Institution of Oceanography, La Jolla, Calif. 92037 U.S.A.

Institute of Science and Industrial Research, Osaka, SIR Japan. SIRI Sugar Industry Research Institute, Mauritius. SIW Smithsonian Institution, Washington, D.C. 20560 SKS Stuttgart-Korntaler Collection; Mycological-Bacteriological Arbeitsgemeinschaft, Staudtstrasse 19, Korntal b. Stuttgart, Germany. SKU Faculty of Science, Kyoto University, Kyoto, Japan. Smith See NRS. **SMKU** School of Medicine, Keio University, Tokyo, Japan. SOE Servicio Oleiocola, Encantado, Brazil, S.A. SOU Faculty of Science, Osaka University, Osaka, Japan. SPL Department of Bacteriology, State Laboratory for Soil and Crop Research, Lyngby, Denmark. Squibb SRI The Scientific Research Institute, Ltd., Sumiki Laboratory, Tokyo, Japan. SRL Shionogi Research Laboratory, 2147, Kami, Sagisu, Fukushima-ku or 2047 Sagisu-kamidori, Fukushima-ku, Osaka, Japan. Also Shionogi and SHIO. SRMS Station of Research and Soil Microbiology, 7 rue Sully-21-Dijon, France. SRS Sericultural Research Station, Ales, France. Sericultural Experiment Station, Taitama Prefec-SSES ture, Japan. SSIC State Serum Institute, Copenhagen, Denmark. STMPR School of Tropical Medicine, Puerto Rico. STO Sapporo Taxation Office, Hokkaido, Sapporo, Japan. Australian Inoculant Research and Control Service. SU Department of Agriculture, P.M.B. 10, Rydalmere, New South Wales 2116, Australia. SVÚ State Veterinary Laboratories, Czechoslovakia. TA Bacteriology Laboratory, Department of Agriculture, Launceston, Tasmania, Australia. Takeda Takeda Chemical Industries, Ltd., Juso-Nishinocho, Higashiyodagawa-ku, Osaka, Japan. Tokyo Agricultural University, Tokyo, Japan. TAU

TC

TCCJMI

TCXA

TDEL

Chicago, III. 60604 U.S.A. Forerunner of ATCC.

Department of Biological Sciences, Technological

Type Culture Collection, John McCormick Institute,

College, Prague, Czechoslovakia.

Moscow Order of Lenin Agricultural Academy, Moscow, U.S.S.R. See TSKHA.

Technical Development Establishment Laboratory, Kanpur, India.

Technical High School, Delft, Netherlands. TH THU Department of Fermentation Technology, Hiroshima University, 3-chôme, Senda-cho, Hiroshima-city, Japan. Herbarium of the Department of Botany, Faculty TI of Science, University of Tokyo, Tokyo, Japan. Laboratory of Biological Chemistry, Tokyo Institute TIT of Technology, Tokyo, Japan. **TJM** Tokyo Jikeikai Medical School, Tokyo, Japan. Tokai-Kinki National Agricultural Experiment TKA Station, Tsu, Japan. Faculty of Technology, Kyoto University, Kyoto, **TKU** Japan. TL Treub Laboratory, Bogor, Indoneisa. Treub Laboratory, Buitenzorg, Java. Tokyo-to Laboratory for Medical Sciences, Tokyo, TLM Japan. Laboratory of Applied Microbiology, Faculty of TOT Agriculture, Tottori University, Japan. Tropical Products Institute, 56-62 Gray's Inn Road, TPI London WC1, England. Tea Research Institute, Ceylon. TRIC Timber Research Laboratory, Johannesburg, TRL Union of South Africa. TRTC Department of Botany, University of Toronto, Toronto, Ontario, Canada. **TSCHA** Agricultural Academy im. Timiryazeva, Moscow, U.S.S.R. Taiwan Sugar Experimental Station, Taiwan, China. **TSES TSGNKI** Tarasevicha Central Government Scientific Institute, Sivtsev-Vrazhek, 41, Moscow, U.S.S.R. (ЦГНКИ) K.A. Timiryazeva, Moscow Order of Lenin Agricul-TSKHA tural Academy A, 8, Novoe Shosse, Moscow, (ЦХА) U.S.S.R. National Science Museum, Tokyo, Japan. **TSM TSMP** V.V. Doku'eva, Central Museum of Soil Science $(UM\Pi)$ B-164, Birzhevoy Proezd, 6, Leningrad, U.S.S.R. **TSNIIMOD** Central Scientific-Research Institute of Mechanical (ЦНИИМОД) Cultivation, Laboratory of Proving Grounds, Tests and Antiseptics, Solnechogorsk, obl., pl. Lesnaya, Moscow, U.S.S.R. Central Scientific-Research Institute of the Butter **TSNIIMS** and Cheese Industry, g. Uglich, Yaroslavskoi (ЦНИИМС) obl., Krasnoarmeiskii Bul., 19, U.S.S.R. V.A. Kucherenko, Central Scientific-Research In-**TSNIISK** (ЦНИИСК) stitute of Building Construction Z-389, 2-ya

Institutskaya ul., 6, Moscow, U.S.S.R.

ture & Technology, Tokyo, Japan.

Faculty of Agriculture, Tokyo University of Agricul-

TUAT

Bacterial Laboratory, Tokyo University of Fisher-TUF ies, Tokyo, Japan. U Department of Microbiology, Agricultural College, Ultuna S-75007, Uppsala 7, Sweden. UA Agricultural Chemistry of Soils, University of Arizona, Tucson, Ariz. 86721 U.S.A. UAB University of Aston in Birmingham, Birmingham, England. **UAMH** Mold Herbarium and Culture Collection, University of Alberta, Edmonton, Alberta, Canada. UC Department of Bacteriology, University of California, Davis, Calif. 95616 U.S.A. orInstitute of Plant Pathology, Universita Cattolica del S. Cuore, Piacenza, Italy. University of Colorado, Denver Center, Denver, Colo. 80202 U.S.A. or Culture Collection, The Upjohn Company, Kalamazoo, Mich. 49001 U.S.A. Also Upiohn. Division of Bacteriology, Agricultural Experiment UCCA Station, College of Agriculture, University of California, Davis, Calif. 95616 U.S.A. School of Medicine, University of Chicago, UCH Chicago, III. 60637 U.S.A. Department of Bacteriology, University College Hospital Medical School, University Street, Gower Street, London, England. UCLAF See Roussel. Department of Microbiology, Institute of Medical-UCST Biological Sciences, University of Concepción, Casilla 272, Concepción, Chile, S.A. UCW Department of Agricultural Botany, University Colege of Wales, Penglais, Aberystwyth, Wales. UD Culture Collection of Hydrocarbon Utilizers and Suspect Utilizers, Department of Biology, University of Dayton, Dayton, Ohio 45409 U.S.A. Department of Food Science and Technology, University of California, Davis, Calif. 95616 U.S.A. ÚEM See IEM. See IEM. UEM Regulations Epidemiology and Microbiology, **UEMP** Prague, Czechoslovakia. **UFC** United Fruit Company, Norwood, Mass. 02062 U.S.A. University of Geneva, Ginsbra, Switzerland. UGS UHJP Hebrew University, Jerusalem, Palestine.

University of Indiana, Bloomington, Ind. 47401 UI U.S.A. The Ukranian Research Institute of Food Industry, UIFI Kharkov, Ukr.S.S.R. (ЧИФИ) University of J.E. Purkyne, Brno, Czechoslovakia. UJEP Institute of Microbiology, Academy of Science, UkrIM Bol'shaya Zhitomirskaya 28, Kiev, Ukr.S.S.R. (ЧкрИМ) **UkrNIIPP** Ukranian Scientific-Research Institute, Pishchevoy Promyshlennosti, Sumskaya, 3, Kharkov, Ukr.-(ЧкрНИИПП) S.S.R. University of Microbial Cultures, Kumasi, Depart-UMCK ment of Biological Sciences, University of Science and Technology, Kumasi, Ghana. University of Maryland, College Park, Md. 20740 U.Md. U.S.A. Chair of Agrarian and Industrial Microbiology, UNC Faculty of Agrarian Science, National University of Cuyo, Mendozo, Argentina, S.A. United Nations Development Program. UNDP United Nations Environmental Program. UNEP **UNESCO** United Nations Education, Scientific and Cultural Organization. United Nations Industrial Development Organi-UNIDO zation. Institute of Microbiology, National University of UNT Tucumán, Ayacucho 482, San Miguel de Tucumán, Argentina, S.A. UO University of Oglethorpe, Atlanta, Ga. U.S.A. Upjohn See UC. **USAMSGS** U.S. Army Medical Services Graduate School, Washington, D.C. 20012 U.S.A. USDA United States Department of Agriculture, Washington, D.C. 20250 U.S.A. Former Plant Industry Station, now part of Agricultural Research Center United States Department of Agriculture, Beltsville, Md. 20705 U.S.A. USDI United States Department of the Interior, Washington, D.C. 20242 U.S.A.

USFCC USMH

USPH **USSB**

USSR, ARI (ЧССР, АРИ) **USSR IPP** (ЧССР ИПП)

United States Federation of Culture Collections. University of Sheffield Mycological Herbarium, Sheffield, England.

United States Public Health Service.

Department of Microbiology, University of Agricultural Sciences, Bangalore-24, India.

See ARI.

The U.S.S.R. Research Institute for Plant Protection, Leningrad, U.S.S.R. See also VIZR.

USSR RIA (ЧССР РИА)

See RIA

UWA

Department of Soil Science and Plant Nutrition, Institute of Agriculture, University of Western Australia, Nedlands, Western Australia 6009, Australia.

UWCA

College of Agriculture, University of Wisconsin, Madison, Wis. 53706 U.S.A.

UWO

University of Western Ontario Culture Collection, Botany Department, University of Western Ontario, London, Ontario, Canada.

VFB

Veterinary Faculty, University of Agriculture, Brno, Czechoslovakia.

VIZR (ВИЗР) All-Union Institute for Plant Protection, ul. Gertsena, 42, Leningrad, U.S.S.R. See also USSR IPP.

VKF

Veterinary Faculty, University of Agriculture, Košice, Czechoslovakia.

VKM (BKM) VNIIA All-Union Collection of Microorganisms, Moscow, U.S.S.R.

(ВНИИА)

See RIA.

VNIFF (BHИФФ)

(ВНИФФ) VNIIM VASCHNIL

(ВНИИМ ВАСЧНИЛ)

VNIIs/khM (ВНИИс/хМ) All-Union Scientific-Research Institute of Phytopathology, st. Golitsino, Moscow, U.S.S.R.

All-Union Scientific Research Institute s.ch. Microbiology, VASCHNIL, Moscow, U.S.S.R.

All-Union Scientific-Research Institute of Agricultural Microbiology, ul. Gertsena, 42, Leningrad, U.S.S.R. *Also* VNIIs/khM-L.

See VNIIs/khM.

VNIIs/khM-L

(ВНИИс/хМ-L) VNIIs/khM-M

(ВНИИс/хМ-М)

All-Union Scientific-Research Institute of Agricultural Microbiology, Konyushkovskaya, d.31, Moskovskoe Otdelenie, Moscow, U.S.S.R.

VNIISP (BHUUCП) All-Union Scientific-Research Institute of the Alcohol and Liquer Industry, Samokatkaya ul., 46, Moscow, U.S.S.R.

VNIMI (BHИМИ) VNIVI All-Union Scientific-Research Institute of the Dairy Industry, Lyucinovskaya, 35, Moscow, U.S.S.R.

(ВНИВИ)

All-Union Scientific-Research of Vitamins Institute, Novokuznetskaya, d. 7, Moscow, U.S.S.R.

VRI

Veterinary Research Institute, Brno, Czechoslovakia.

VSCHT

Faculty of Chemistry, Technical University, Prague, Czechoslovakia.

VUHEM

Army Research Institute for Hygiene, Epidemiology and Microbiology, Prague, Czechoslovakia.

VUKP

Research Institute for Distillery and Canning Industry, Prague, Czechoslovakia.

Research Institute for Food Technology, Prague. **VUPT** Czechoslovakia. Cocoa Research Institute of Ghana. (Formerly WACRI West African Cocoa Research Institute.) Wright Air Development Center, Dayton, Ohio WADC 45433 U.S.A. West African Institute for Oil Palm Research. WAIFOR Department of Bacteriology, College of Agricul-WB ture, University of Wisconsin, Madison, Wis. 53706 U.S.A. See WRL. Wellcome Woburn Experimental Station, Bletchley, Bucks, WES England. World Health Organization, Avenue Appia, 1211, **WHO** Geneva, Switzerland. WIPO World Intellectual Property Organization. Warner Lambert Research Institute, Morris Plains. **WLRI** N.J. 07950 U.S.A. Department of Bacteriology, Westminster Medical WMS-DB School, London, England. Walter Reed Army Institute of Research, Washing-WRAIR ton, D.C. 20012 U.S.A. Burroughs Wellcome Research Laboratories, WRL Beckenham, Langley Court, Kent, England. Also Wellcome. Western Regional Research Laboratory, Agricul-WRRL tural Research Service, U.S. Department of Aggriculture, Berkeley, Calif. 94710 U.S.A. Formerly referred to as Western Marketing and Nutrition Research Division or Western Utilization Research and Development Division. Wyeth Laboratories, Inc., 611 East Nield Street, Wyeth West Chester, Pa. 19380 U.S.A. YCC Yeast Culture Collection, Department of Food Technology, University of California, Davis Calif. 95616 U.S.A. Yamanishi Fermentation Institute, Yamanaishi Uni-YFI versity, Kofu, Japan. See RIFY. **YMC** Yamaguchi Medical College, Abe, Japan. YP Tokyo Institute, Yamanouchi Pharmaceutical Company, Ltd., Tokyo, Japan. **YPMC**

YU

YUK

ZIL

(ЗИЛ)

Microbial Institute, Yamaguchi Prefectural College of Medicine, Tokuyama, Japan.

Yale University, New Haven, Conn. 06520 U.S.A.

Faculty of Engineering, Yamanashi University, Kofu, Japan.

Zoological Institute, Academy of Science, Universitetskaya nab., 1, Leningrad V-164, U.S.S.R.

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
NORTH CENTRAL REGION
PIONEER INDUSTRIAL PARK
2000 WEST PIONEER PARKWAY
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